

Look around for a place to sow a few seeds.

Henry Van Dyke

HOW TO SAVE SEEDS



Prepared for

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Memorial Library
Emporium, PA



Welcome to the tradition of seed saving!

Seed saving has always been a way of life for families, farmers and communities. Previous to seed catalogs appearing in the 1700s, the only way society had seeds for their food was to save them. The seeds were family, or community heirlooms handed down through generations. It's a long, and storied tradition that kept people fed, kept plant lines alive, and produced lines of strong seeds with a strong and diverse gene pool adapted to local environments.

It's a tradition that held has on, however a lot of plant lines have vanished. Through the work of some dedicated individuals and organizations, we have some really great heirlooms left. This seed library is here to inspire and encourage you to become part of this tradition. It's not hard, and there are advantages to doing it, such as ensuring your favorites are in your garden every year, saving strong seeds that adapt to the local growing environment, which makes for stronger plants and better yields, and most importantly, keeping seed lines from vanishing forever. If no one ever saved seeds, how would plants grow?

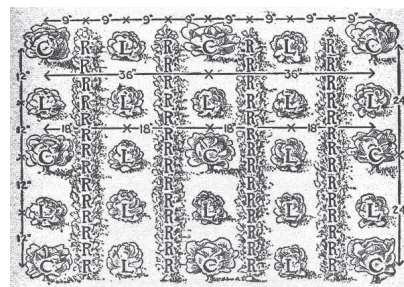
The information in this booklet is an introduction to this wonderful tradition that's sustained generations over many centuries. It's meant to inspire you to be a part of the heirloom legacy that nature intended. As the tag line for the Library Seed Bank, the organization responsible for this booklet suggests, seeds and knowledge, nourishment for your soul.

Overview

This booklet is geared toward the backyard, patio, and community gardener, or even farmer who wants to save their seeds. It's a guide to the terms and processes that are involved with seed saving. There are many resources available if you want to take the basics presented here and take it further. *Seed to Seed: Seed Saving Techniques for the Vegetable Gardener* by Susan Ashworth is a excellent resource. Without further ado, let's get started!

Where to start

A good place to start is with a garden plan. If you want to save seeds, some planning ahead helps. For example, know how your plants pollinate. Do they self-pollinate (selfers), or are they pollinated by pollinators and or the wind? It's also important to know what your neighbor is planting to keep possible cross-pollination to a minimum. Do you know what kind of seed you're planting, and why this is important? Are they an open pollinated seed or hybrid seed?



Certain plants produce seeds in their second year known as biennials. These include cabbages, beets, carrots, cauliflowers, onions, and turnips. To save seeds from these plants they have to be dug up with the root, stored in a root cellar, and replanted the following spring. As you progress on your seed saving journey, this may become an option. This guide will walk through the questions, and provide the answers to help you plan.

Pollination



Pollination is how the flowers get fertilized so they can produce the fruit or vegetable, and eventually produce the seeds that you will save. There are two methods, self pollination (selfers) and insect and or wind pollination. Knowing how the plants in your garden pollinate, and what your neighbor grows will help you when you plan your garden, and reduce as much as possible, cross pollination. After all this is nature, and in the end, anything is possible. That's the beauty of it.

The selfers (tomatoes, peas, eggplants, beans), take care of pollination on their own, and generally they don't cross pollinate. It can happen, but it is rare. The selfers are a good place to start with seed saving. The plants that are pollinated by insects and or the wind (cucumbers, peppers, melons, and squashes), they run the risk of cross pollination. This is why it's important to know what your neighbor is growing. They need to be isolated by distance, or staggered growing time. To avoid this when you start out, grow just one variety of each.

Seeds, open pollinated versus hybrid

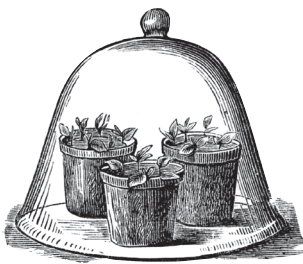


Heirloom seeds fall into this category, along with new varieties that are bred to have the characteristics of heirloom plants. The open pollinated plant line is stabilized with any irregularity grown out, and the genes of these plants are diverse from collecting them over a number of years. A diverse gene pool protects crops from failure due to gene standardization in hybrids. Open pollinated seeds are the seeds to save.

You can't save hybrid seeds. Hybrids are plants that are crossed by two plants of the same variety to produce standardizations of characteristics, or disease resistance. The seeds that these plants produce could revert back to one of the parents. The Seed Library stocks only open pollinated seeds, and request that any seeds that are returned be the same, or if you wish to donate seeds, that they be open pollinated.

A word about heirloom seeds and plants

*From the handout
Heirloom Seeds and Plants at Strawberry Banke Museum
Portsmouth, New Hampshire*











Heirloom seeds hold both historic and genetic significance. They connect us to the past and those who collected them through antiquity. Heirloom seeds came of a time before hybridization. They are seeds, which have developed through a process of natural selection and thus reflect the needs and ideals of the generations that gathered and preserved them. Because these seeds are open pollinated, they can still be gathered and saved by home gardeners. This enables the gardener to save seeds from the earliest, most productive or flavorful produce, the sweetest flower, or the plant best adapted to the soil and climate of a particular region.



Seed ripe, not eating ripe

There is a difference. The plant knows this, and to be successful at saving seeds, it's always best to follow the plant's lead. Here is a breakdown of the when fruits and vegetables are seed ripe. This list is from the *Farmer's Almanac*, Summer 2002;







-  Pepper seeds are ripe when peppers are at their full color—depending on variety, this could be red, orange, yellow, purple, or black—and start to shrivel.
-  Tomato seeds are ripe when tomatoes are firm but tender. If you press them, they have some give, unlike the hard feel of green ones. Like peppers, they will also have reached their full color.
-  Cucumber seeds are ripe when the cuke turns fully yellow—overripe for eating. Harvest it and put it in a safe place for another 20 days.
-  Winter squash seeds are ripe when the skin turns hard.
-  Summer squash seeds are ripe when the squash is past the edible point, with a hard rind. Then treat the same as winter squashes.
-  Watermelon seeds are ripe when the tendril directly opposite the stem turns from green to brown and becomes dry.
-  Cantaloupe and muskmelon seeds are ripe when the stem turns brown and dries, and the melon readily separates from it.
-  Peas and beans are ready when the pods turn brown on the vine and shrink against the seeds.







Wet Process

A fermentation process is needed for removing seeds from tomatoes and cucumbers to release them from the gel they are encased in. It does not ferment the seed.

-  Remove the seeds and place in a jar or a glass. Fill with water, cover container and leave in a warm area for three days. Stir once a day.
-  After three days, if any fungus formed at the top, remove it. Let the mixture settle, and remove any floating seeds. The seeds at the bottom are what you want.
-  Pour the liquid through a fine mesh strainer. Rinse the seeds thoroughly and set them out to dry. Keep them out of the sun.
-  A tray, screen or plate works, so do paper towels where seeds will dry onto the paper towel. Once dry, remove the seeds and store. Or, store the dried paper towel.
-  For squashes, remove the seeds, rinse off any stringy material, and let dry.
-  For watermelons, cantaloupes and muskmelons, remove the seeds from the flesh, wash off any residue. Place the seeds in water, and the good seeds will sink to the bottom. Discard any seeds that float on the top.

Dry Process

This technique is for vegetables whose seeds are held inside pods, husks, or any other dry casing like peas, beans, and carrots. Do this in dry weather as the seeds mature. Never harvest wet seed pods or seed heads to prevent mold from forming.

-  Let the seeds pods dry on the plant and remove as they dry. To verify if the bean or seed is dry, squeeze it. If it feels mushy or spongy, let it dry until it's hard.
-  Secure a paper bag, or nylon stocking with a rubber band, twist tie or twine over seed heads and pods on plants that dry from the bottom up like lettuce, onions, cabbages, radishes and Chinese greens. If left alone without a something to catch the seeds, the seed heads will open after they dry to reseed the area where they grew/ The nylon stocking allows you to see inside. Remove the seeds from the seed heads, pods or casing, and dispose of the chaff and plant material. Please note, if you're going to do the bag method, keep an eye on the weather. If rain is forecast, remove the bag before the rain, let the plant dry, and replace it.



Storing seeds

Keep the seeds away from fluctuating temps, and high heat and humidity. Cool and dark is best. A refrigerator or freezer are good options. Make sure you have a backup plan in the event of long-term power outage. Paper envelopes, washed out pill bottles, recycled snack containers for the large seeds, are options. It's heat and humidity that you want to avoid. Frozen seeds last the longest.

Seeds could last a very long time when saved properly. The general estimate is between five years and 10 years. Keep in mind that seeds are dormant until they get the proper signal of heat and humidity to sprout. The longer they stay dormant, the less likely they will be able to germinate. If you save seeds every year, you really don't have anything to worry about.

A simple germination test will tell you if your seeds are still good. Take a paper towel and wet it, place some seeds in it, fold it up to fit inside a ziplock bag. Place the bag somewhere warm, and in light. If your seeds are good, they will germinate. Try 10 seeds if you can spare them, and see what your germinate rate is. This will give a sense of how fertile the seed are.

Conclusion

With a little planning, some knowledge about how your plants pollinate and when they are seed ready, along with a little processing, you're on your way to collecting seeds. Remember by saving seeds you are ensuring biodiversity by keeping plant lines from disappearing, you will have your favorites in your garden every year, and you will preserve a long and storied tradition that you can share with your family, friends and community.

That is the ultimate heirloom.





Notes



Notes



Sources for seeds, plants, trees, advocacy

Here are resources for heirloom varieties of seeds, plants, trees and advocacy. The list is in no particular order, is not comprehensive and is not an endorsement of one over any other.

Please take a look around and see which of these links feel right for you.

Seed Savers Exchange — extensive seed selection, potatoes and garlic

Hudson Valley Seed Library — great people, their own seed farm and fine art

Seed Matters — advocates for seed and organic plant breeding and organic farming

Organic Seed Alliance — organic seed development and education

Baker Creek Heirloom Seeds — comprehensive resource for heirloom gardening

Tomatofest — strictly heirloom tomatoes

D. Landreth Seed Company — oldest seed house in America

Fedco Co-op Garden Supplies — co-op seed house, potatoes here

Victory Seeds — tobacco included here

Heritage Harvest Seed — specializes in very old heirlooms

Terrior Seeds — seeds, gardener referral program, seed collections with related books

Sand Hill Preservation Center — they have rare poultry also

Trees of Antiquity — specializing in heirloom fruit and nut trees

Seeds of Italy — specializing in Italian heirlooms

Cross Country Nurseries — they have a wide selection of plants not seeds

High Mowing Organic Seeds — flowers, vegetables, herbs, cover crops

Pinetree Garden Seeds — flowers, herbs, fungi and mushroom kits and plugs

Maine Potato Lady — organic potatoes and garlic

Kitazawa Seed Company — specializing in Asian varieties since 1917

Bountiful Gardens — a resource for seeds, trees, books, mushrooms, tools, etc.



About Library Seed Bank

Library Seed Bank (LSB) is project started by Jeff Quattrone, an artist and seed advocate. LSB works with public libraries, schools, or community group to establish seed banks or seed libraries at those organizations.

As part of this project, an open source research project is in process called the Historic Seed Map that will map local seed companies and what they offered for sale. This will be a reference for the groups that establish seed bank, gardeners, farmers and the general public to see what was historically grown in their areas and procure the seeds, if they are still available.

For more information, please visit www.libraryseedbank.info.

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